MODEL : SB-5680CAK
8x8 HDMI-HDBaseT Matrix Switcher

8x8 HDMI-HDBaseT Matrix Switch with Auxiliary Audio I/O

4K|2K CAPABLE

HDMI-HDBaseT-AUDIO MATRIX SWITCHER SERIES

Thank you for purchasing the SB-5680CAK HDMI-HDBaseT Matrix Switcher. You will find this unit easy to install and highly reliable but it is essential that you read this manual thoroughly before attempting to use 8x8 HDMI-HDBaseT Matrix switcher.

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the “ON” position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically “blown free” of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualifier service personnel when:
    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance
    E. The equipment has been dropped, or the enclosure damaged.

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INTRODUCTION

The SB-5680CAK is professional 8x8 matrix routing switch. Supporting eight (8) HDMI Inputs, 8 Auxiliary Audio Inputs, and (8) HDBaseT Inputs. Supports 8 HDMI Outputs, 8 SPDIF Outputs, and 8 HDBaseT (PoE) Outputs. The SB-5680CAK is based on the HDBaseT standard and supports full resolution HDMI Video with embedded PoE, Audio, RS-232, Ethernet and bi-directional IR, all over a single CATx cable. With a signal bandwidth of 340Mhz, there is no signal degradation. High Definition Digital signals can be selected and distributed to any 8 Inputs to 16 Outputs simultaneously (channel outputs mirrored). The Switcher is certified as being fully CEC and HDCP 2.2 compliant, HDMI 4K2K V1.4a 3D formats, data rates up to 6.75 Gbps. Supports UXGA/WUXGA/DVI 1920x1200 resolution to any HD displays. The SB-5680CAK has 1x HDBaseT and 1x HDMI connector for each Input and output, effectively making this an 8 in x16 out switcher (same signal on both outputs). Using the HDBaseT Input and our HDBaseT remote Transmitter allows you to connect a source in a remote location. Likewise, the HDBaseT Output and our HDBaseT Receiver allows you to connect a display in a remote location. EDID management can be selected between eight (8) different modes. Control is provided via Front panel push buttons, IR remote, RS-232 or TCP/IP (not a web-browser). An RS-232 Windows GUI interface is provided for matrix routing control (Windows only).

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

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PACKAGE CONTENTS

Check that you have the following components;

- SB-5680CAK Matrix Switcher
- Master wireless IR Remote Control (SW-5680)
- 8 each; Individual wireless IR Control (SW-5680-IR01~IR08)
- 19 inch Ear mount bracket (Part # 3U-440L)
- SB-101 IR Extender distance ~984 feet (300M) Transmitter set.
- SB-100 IR Extender distance ~984 feet (300M) Receiver set.
- SB-101C IR Extender distance 6ft(2M) Transmitter Cable.
- SB-100C IR Extender distance 6ft(2M) Receiver Cable.
- CD Contents : This manual, Windows GUI, ISP V1.0 Windows driver
- RS-232 Cable 6 feet (2M)
- ISO Screws
- RS-232 V2.0 Protocol Instructions
- Ethernet V2.0 Protocol Instructions
- Users Guide
- Worldwide Universal Power Supply 100~230 VAC, AC 50/60Hz, 10A.

-- SB-6320T HDBaseT Transmitters & SB-6320R HDBaseT Receiver sold separately. –

FEATURES

Based on HDBaseT; bi-directional IR, RS-232, Multi format Audio, Ethernet and PoE. Full resolution HD Video, all HDBaseT signals over one CATx cable.

- (8)x HDMI with Auxiliary Audio (Analog Audio) and (8)x HDBaseT Receiver devices matrix switched to
- (8)x HDMI with S/PDIF outputs and (8)x HDBaseT Transmitter with PoE output to (8)x destinations.
- Application HDBaseT Specification with PoE (optional), IR, RS-232, Multi Audio Format and HD
- Video Signals over one CATx (6/6a/7) category cable.
- HDMI digital Video w/embedded HDCP, DVI format and CEC/HDCP 2.2 compliant
- Worldwide control EDID modes for HDMI full 4K2K HD Video resolutions.
- Link speeds of up to 6.75 Gbps (link clock rate of 340MbHz), Support HDMI 4K2K, 1.4a 3D formats.
- Wide range of HD resolutions from PC XGA to WUXGA 1920x1200 and HDTV/DTV HDMI resolutions
- 480i/480p, 576i/576p, 720p, 1080i/p & 4K2K.
- Compatible with all HDMI source devices, PC monitors, Plasma HD display, HDTV and audio receivers or audio amplifiers.
- Digital Video TMDS formats Resolution up to 4K2K with Deep color 36-bit.
- Digital Audio Support :
  - Dolby TrueHD,
  - Dolby Digital,
  - Dolby Digital Plug/ex,
  - DTS,
  - DTS-HD,
  - DTS-HD Master,
  - DTS-EX
  - PCM,
  - PCM2,
  - LPCM2
- Audio Input : Support Auxiliary Audio (Analog stereo audio).
- Audio Output : Support Digital audio ARC or Digital audio S/PDIF (from HDMI source or Auxiliary Audio)
- Various User Interface controls:
  - Windows based GUI control via RS-232 port
  - Front Panel push button
  - IR wireless remote controller
  - Ethernet Switch control
  - Third party RS-232 controller (via simple ASCII)
- Support world wide (10)x control function keys: ARC / AUX/ HDBaseT / ALL / OFF / EDID / LOCK / RECALL / MEMORY / ENTER
- Support EDID modes :
  - Embedded EDID modes : FSS/ H24-3D/ H24-3D-M/ H36-3D/ H36-3D-M/ 4K2K-3D / DVI-D 1920x1200-60Hz/ AUTO
  - External modes : Learning mode.
- Automatic scanning input & output status via LCM show on front panel.
- Support IR Remote and IR Extender with distance up to ~ 984 feet (300M) Maximum.
- EDID configuration via Internal and External modes.
- Support Universal power adaptor AC90V~AC230V, 50/60Hz.
- The Switcher will remember that last state during a power cycle.
- When power is removed and resorted, the last configuration will be invoked.

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When power is removed and resorted, the last configuration will be invoked.

SPECIFICATIONS

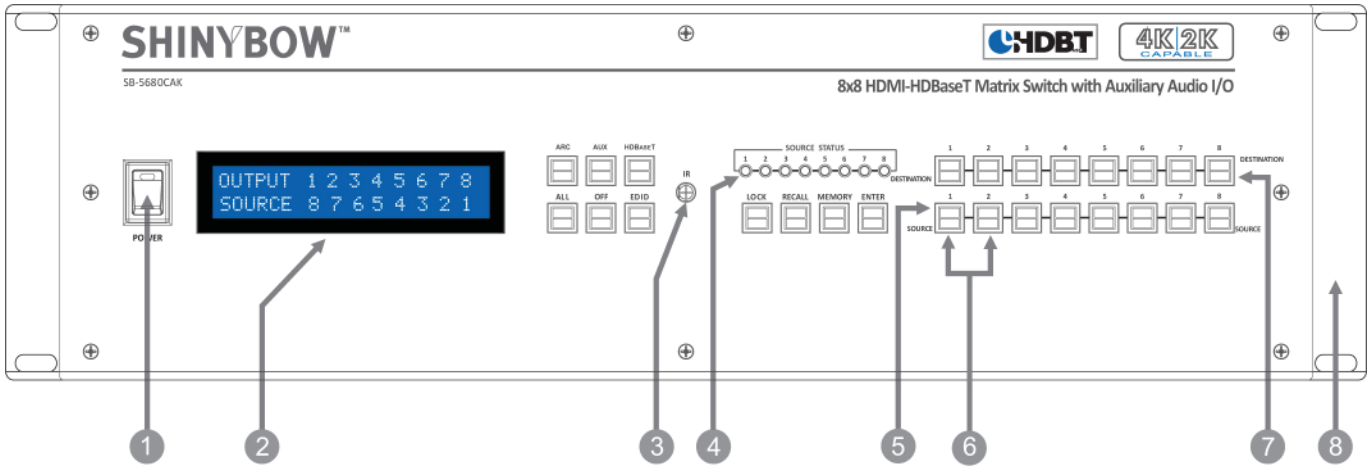
SPECIFICATIONS

- **Type of HDMI Switcher:** 8x inputs To 8x Outputs HDMI & HDBaseT Matrix Switch with Audio and Extension
- **HDMI Support:** HDMI 4K2K, 1080p-@60Hz, H36-bit Deep color, 3D of HDMI V1.4 formats
- **HDBaseT Support:** Bi-directional IR, RS-232, Multi format Audio, Ethernet and PoE. over one CATx cable.
- **HDCP / CEC Support:** HDCP 2.2 Compliant, CEC Compliant
- **Video Bandwidth:** Double Data Rates: 340 MHz, Total 6.75Gbps bandwidth
- **Digital Video Support:** HD:480i/ 480p/ 720p/ 1080i/p and 4K2K up to 36bit deep color
- **Inputs:**
  - **1. HDMI:**
    - 8x HDMI (HDMI or DVI digital source).
    - 8x Audio (Auxiliary Audio : Analog Stereo Audio).
  - **2. HDBaseT:**
    - 8x HDBaseT Receiver (via category cable CATx & RJ-45 connector)
    - 8x IR in (Send IR signals To 8x Rooms via HDBaseT Transmitter)
    - 1x ALL IR in (Send IR Signals To 8x Rooms - Via HDBaseT Transmitter)
    - 1x LAN (ALL Switcher's HDBaseT Receiver Ethernets Link to External HDBaseT Transmitter)
- **Outputs:**
  - **1. HDMI:**
    - 8x HDMI (To Destination).
    - 8x S/PDIF / ARC: **S/PDIF :** Source from HDMI or Auxiliary audio / **ARC :** TV Return Channel Audio.
  - **2. HDBaseT:**
    - 8x HDBaseT Transmitter with PoE (optional) via category cable & RJ-45 connector)
    - 8x RS-232 I/O (Control 8x Rooms RS-232 via HDBaseT Extender)
    - 8x IR out (Link to Receive IR signals from 8x Rooms via HDBaseT Extender)
    - 1x ALL IR out (Link to Receive IR signals from 8x Rooms via HDBaseT Extender)
    - 1x LAN (All Switcher HDBaseT Transmitter Ethernets link to HDBaseT Receiver)
- **Switcher Controls:**
  - 1x Select & Function buttons on front panel (Data status via LCM panel show out)
  - 1x IR Remote Controller (switch control)
  - 8x IR Room Remote Controller (switch control)
  - 1x IR External port (switch control via 3.5mm OD Jack)
  - 1x RS-232 series interface (switch control)
  - 1x Ethernet series interface (switch control)
- **Digital Audio Support:** Multi Audio Formats 5.1 / 7.1, MAT(MLP), Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6CH, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH)
- **Source Status:** Input status LEDs indicates presence of a live signal
- **(26) Function Control Keys:** 1. ARC, 2. AUX, 3. HDBaseT, 4. ALL, 5. OFF, 6. RECALL, 7. ENTER, 8. MEMORY, 9. LOCK, 10. EDID, 11. Destination 1 thru 8, 12. Source 1 thru 8
- **(8) EDID management:**
  - **Select Embedded EDID modes :** Mode1: FSS, Mode2: H24-3D, Mode3: H24-3D-M, Mode4: H36-3D, Mode5: H36-3D-M, Mode6: 4K2K-3D, PCM-2CH, Mode7: DVI-D 1920x1200, Mode8: Auto
  - **Select LEARNING mode :** Learning Destination EDID To Link Source.
- **Infrared Frequency:** 38 Khz
- **IR Extend Distance:** ~984 feet / 300 meters maximum.
- **HDBaseT Extender Distance:** ~328 feet / 100 meters maximum.
- **HDMI I/O Connector:** HDMI Type A - SMD 19-pin female type
- **Temperature:** Operating Temperature 32°F - 100°F (0°C - 32°C)
- **Dimensions (LxWxH):** 19 x 9.85 x 5.19 in (482 x 250 x 132mm)
- **Rack Mount:** 3RU High 19 "Rack Mount #3U-440L (with rack mount)
- **Power Supply:** AC 100~240 VAC 50/60Hz (Power Consumption:10A Maximum)
- **Safety Approvals:** CE, FCC, RoHS, REACH.
- **Product Weight:** 4.85 Kgs / 8.08 lb

As product improvements are continuous, specifications are subject to change without notice.

FRONT PANEL

FRONT PANEL



1. POWER ON SWITCH

The power switch turns the unit on and off. The LCM will illuminate blue to indicate the switcher is ON and receiving power. The switcher will remember the last setting during a power cycle. When power is removed and resorted, the last configuration will be evoked.

2. OUTPUT STATUS DISPLAY

Each Output (destination) Channel shows which input (source) is assigned.

3. IR SENSOR

The IR sensor receives IR commands from the supplied remote controller or third party IR emitter.

4. INPUT STATUS DISPLAY

Input sources 1 to 8 LED illuminates blue to indicate that a video source is present on that input.

5. SOURCE SELECT BUTTONS

Separate inputs 1 thru 8 select buttons are provided each source selection.

6. EDID MODE SELECT BUTTONS

Used to select EDID mode using buttons Source button **#1** or **#2**.

7. DESTINATION SELECT BUTTONS

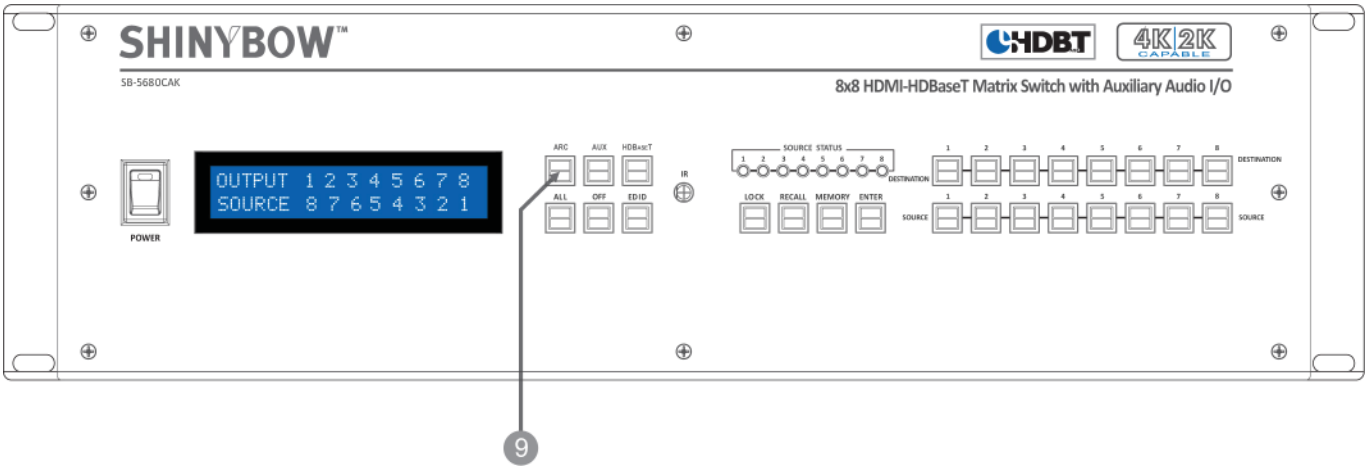
Separate outputs 1 thru 8 select buttons are provided for each destination assignment.
Routing can be Source to Destination or one source to multiple destinations.
Example : Press Destination 1,3,5 then press Source 2 will route Input 2 to Output 1,3,5 respectfully.

8. 19 INCH EAR MOUNT PAIR

Converts desktop to 19 inch rack mount. Bracket (part # 2U-440L) INCLUDED. Image shows rack mount bracket attached.

FRONT PANEL- ARC

FRONT PANEL



9. FUNCTION KEY - ARC

Audio Return Channel (ARC) is a feature that sends audio from the TV back down the HDMI (or HDBaseT) cable to its source device, in this case, the switcher, The audio additional on the " Audio/ARC" port. Not all displays support ARC; check your Users Guide for additional information. (Default = ARC Disabled)

To Enable the ARC option on a specific Output, perform the follow steps:

- Press the **ARC** button.
- On the **Destination** row, Press 1 thru 8 (the button will illuminate).
- Press **ENTER** button. The new configuration will be stored The front panel LCD display will now show an " A " under the Output port.
- Or press **ARC** again to cancel operation.

To Disable the ARC option on a specific Output, perform the follow steps:

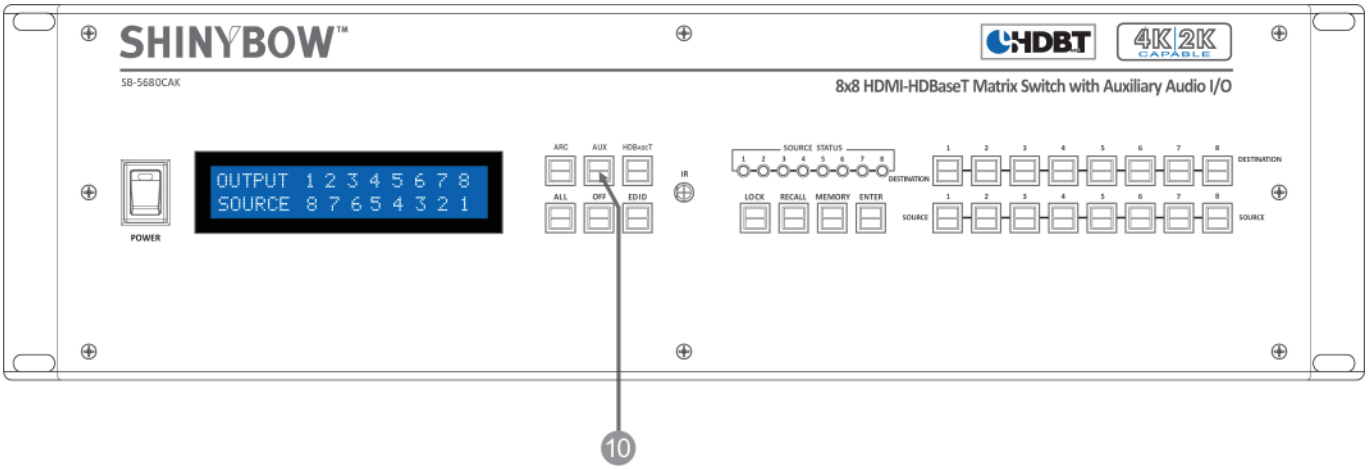
- Press the **ARC** button.
- On the **Destination** row, press 1 thru 8 (the button will illuminate).
- Press **ENTER** The pre-set configuration will execute. The front panel LCD display will be blank under the Output port.
- Or press **ARC** again to cancel operation.

Operation completes.

Note : Operation will abort if no keys are pressed within 5 seconds.

FRONT PANEL- AUX

FRONT PANEL



10. FUNCTION KEY - AUX

The AUX FUNCTION feature allows you to replace the embedded HDMI audio signal with an audio signal that is connected to the switchers Audio AUX Input. Using the AUX function replaces the audio and does not mix the audio. (Default = AUX Disabled)

To Enable the AUX option on a specific Output, perform the follow steps:

- Press the **AUX** button.
- On the **SOURCE** row, Press 1 thru 8 (the button will illuminate).
- Press **ENTER** The new configuration will be stored. The front panel LCD display will show an “X” under the Source port
- Or press **AUX** again to cancel operation.

To Disable the AUX option on a specific Output, perform the follow steps:

- Press the **AUX** button.
- On the **SOURCE** row, Press 1 thru 8 (the button will illuminate).
- Press **ENTER** The pre-set configuration will execute. The front panel LCD display will be blank under the Output port indicating audio source is that which is embedded on the HDMI cable.
- Or press **AUX** again to cancel operation.

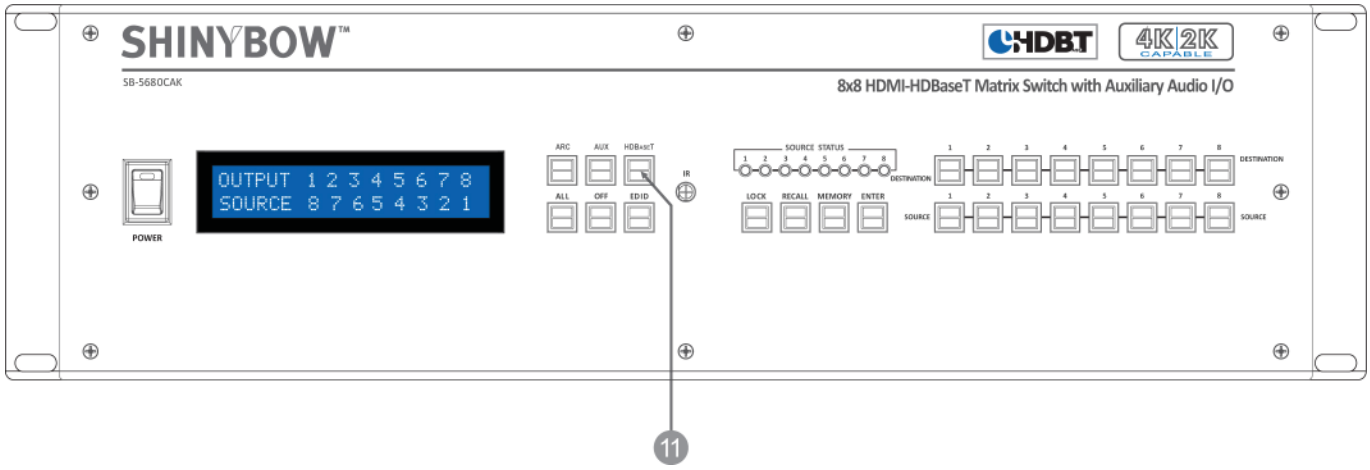
Note :

1. Operation will abort if no keys are pressed within 5 seconds.

2. The AUX Audio input only function when a valid HDMI / DVI video signal is present. Without a video, the AUX audio will not operate.

FRONT PANEL- HDBaseT

FRONT PANEL



11. FUNCTION KEY - HDBaseT

This switcher supports an Input signal originating from either the HDMI Input or HDBaseT Input (Default = HDMI).

You assign the Input type by following these steps:

For HDBaseT Input:

- Press the **HDBaseT** BUTTON.
- On the **SOURCE** row, press 1 thru 8 (the button will illuminate).
- Press **ENTER** the new configuration will be stored. The front panel LCD display will show a " C " under the source port.
- Or press **HDBaseT** again to cancel operation.

For HDMI Input:

- Press the **HDBaseT** BUTTON.
- On the **SOURCE** row, press 1 thru 8 (the button will illuminate).
- Press **ENTER** The new configuration will be stored, The front panel LCD display will be blank under the Source port.
- Or press **HDBaseT** again to cancel operation.

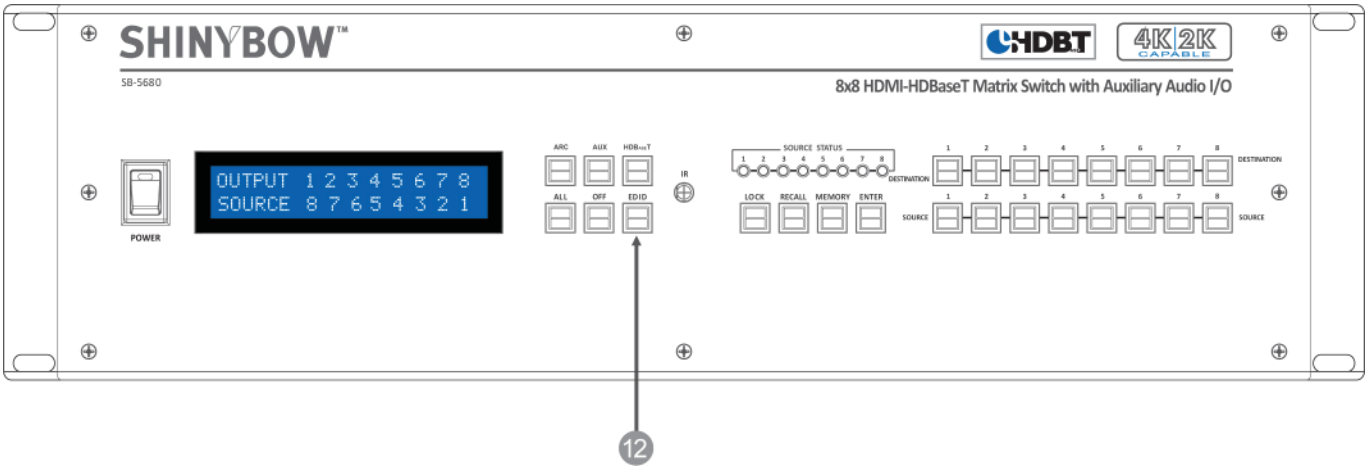
Note :

1. Operation will abort if no keys are dressed within 5 seconds.

2. When you select both HDBaseT Input AND HDBaseT Output; the SB-5680CAK will pass the RS-232 and IR signals between the HDBaseT Transmitter (ie; SB-6320T) and the HDBaseT Receiver (ie; SB-6320R). The switcher's build-in RS-232 ports for that channel will be disabled. Re. Using the HDBaseT Extender and Switcher control define table please be reference the page -27.

FRONT PANEL- EDID

FRONT PANEL



12. FUNCTION KEY - EDID (1)

Used to display change current **EDID** mode.

- Press **EDID** to select new EDID mode or select
- Press **SOURCE** row #1 or #2 Select EDID modes.
- Press **ENTER** to ready memory location.
- Or press **EDID** again to cancel operation.

Operation completes.

Note : Operation will abort if no keys are pressed within 5 seconds.

FUNCTION KEY - EDID (2)

Select external **LEARNING** mode

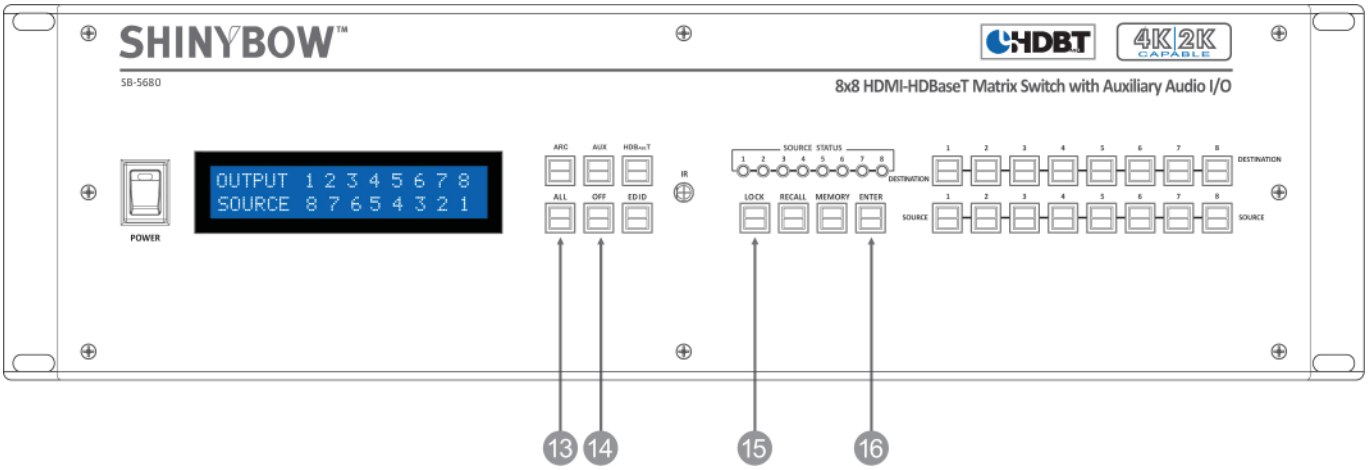
- Press **EDID** to select new EDID mode or select
- Press **Destination** again, press the same Destination #1 thru #8 to learn HDBaseT out port EDID, The EDID for HDBaseT (CATx) has been learned.
- Press **ENTER** to ready memory location.
- Or press **EDID** again to cancel operation.

Operation completes.

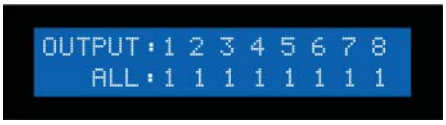
Note : Operation will abort if no keys are pressed within 5 seconds.

FRONT PANEL - ALL - OFF - LOCK - ENTER

FRONT PANEL



13. FUNCTION KEY - ALL



Disables (mute) video on all destinations OR assign the same source to all destinations.

Option 1

- Press **ALL** followed by **OFF** button. The display will show ”0” to indicate none of the destinations are assigned a video source.

Option 2

- Press **ALL** followed by Source 1 thru 8. The display will show the Source selected.
- Press **ENTER** The pre-set source selection will be assigned all destinations.

---

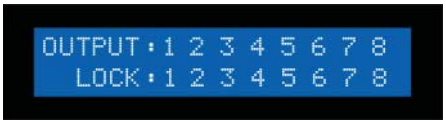
14. FUNCTION KEY - OFF

Disables (mute) video on the selected destinations.

- Press **OFF** button followed by any Destination channel.
- Press 1 thru 8 output destination. The display will show “ 0 “ for the selected channel, indicating no video selected.

---

15. FUNCTION KEY - LOCK



- Press and hold LOCK button for two seconds lockout the front panel.
- Press and hold LOCK button for two seconds to enable the front panel.

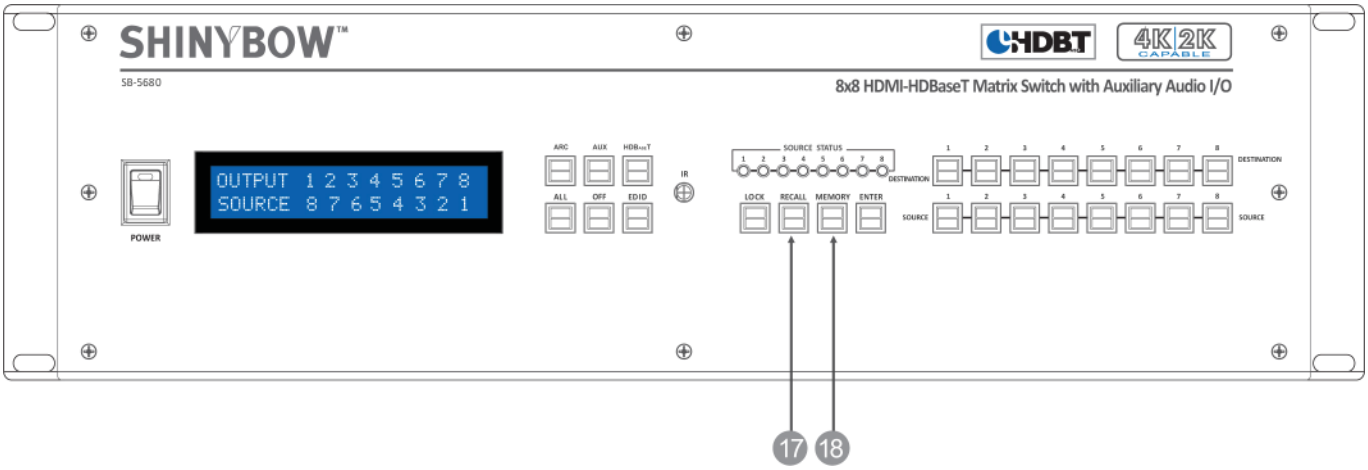
---

16. FUNCTION KEY - ENTER

Press **ENTER** to confirm entries.

FRONT PANEL - RECALL - MEMORY

FRONT PANEL



17. FUNCTION KEY - RECALL

The system will show previously stored presets, up to a total of 16. Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Press **RECALL** button.
- Press 1 thru 8 on either Source or Destination row.
- Press **ENTER** The pre-set configuration will execute.

Operation completes.

Note: ***Operation will abort if no keys are pressed within 5 seconds.***

- Or press RECALL again to cancel operation.

---

18. FUNCTION KEY - MEMORY

The system will show store presets, up to a total of 16. Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Configure desired matrices.
- Press **MEMORY** button.
- Press 1 thru 8 on either Source or Destination row.
- Press **ENTER** to ready memory location.
- Or press **MEMORY** again to cancel operation.

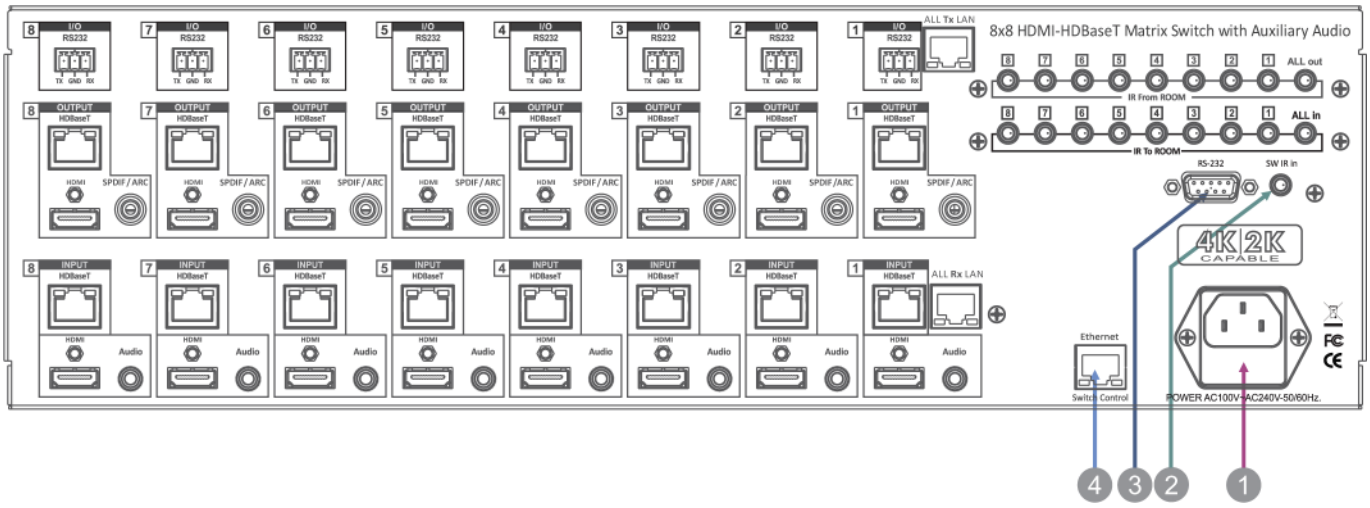
Operation completes.

Note : Operation will abort if no keys are pressed within 5 seconds.

- Or press MEMORY again to cancel operation.

BACK PANEL - SWITCH CONTROLS

BACK PANEL



1. DC POWER INLET:

The Switcher is fitted with a AC power plug input connector. Ensure that the used is of an approved type and is of sufficient current carrying connector capacity with the correct voltage and connector polarity. 100~240Volt AC, 50/60Hz power supply.

Power Socket :

Connector Type : IEC 60320 C13

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2. IR EXTENDER CONTROL:

Support one of IR Extender. Extend distance maximum 300 Meters / ~984 feet. When you plug the External IR extender into the switcher, the front panel IR receiver remain active.

IR Extender Jack: Female Jack - inner OD Ø 3.5mm

---

3. RS-232 CONNECTION:

RS-232 control port to allow for interfacing to a PC. Such as a computer or touch panel control, to the switcher via this DB-9pin Female connector for serial RS-232 control.

Remote Port: DB-9pin Female connector

---

4. ETHERNET CONNECTION:

ETHERNET control port to allow for TCP/IP interfacing to a PC. Such as a computer or touch panel control (not a web-browser), to the switcher via this RJ-45 Female connector to control switcher.

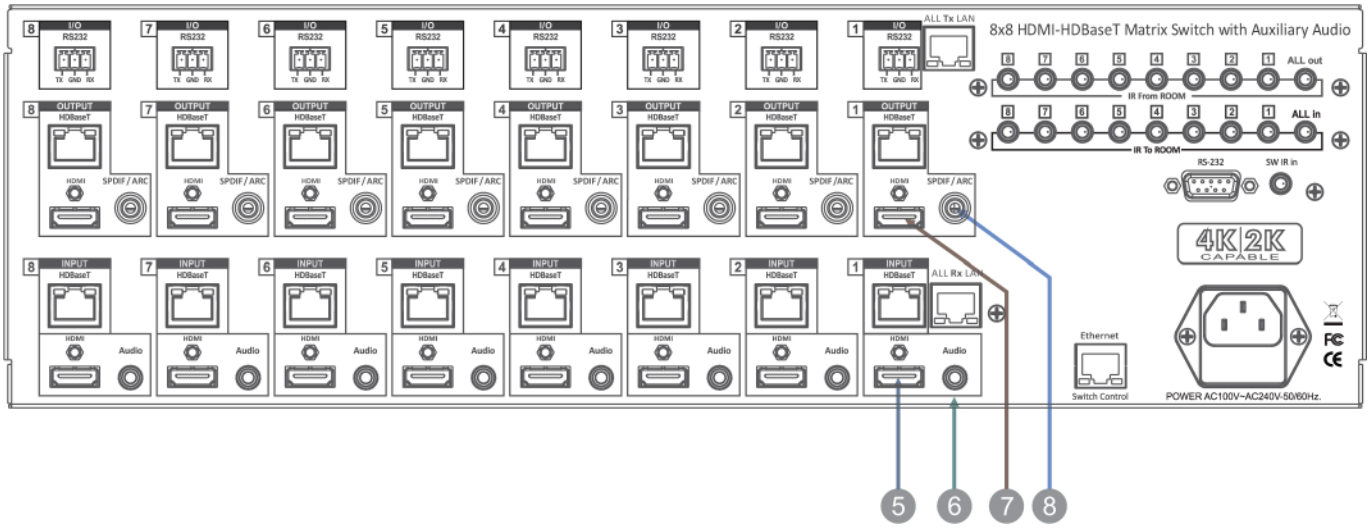
Remote Port : Control the switcher RJ-45 Female connector

Ethernet Port:

Note: the Ethernet port and RS-232 port cannot be used simultaneously. Any connection to the Ethernet port will <u>disable</u> serial commands send to the RS-232 port.

BACK PANEL - HDMI INPUT / OUTPUT

BACK PANEL



5. INPUTS- 1,2,3,4,5,6,7, & 8 HDMI:

Connect a HDMI signal source link of HDMI source direct HDMI digital video/audio to this Female HDMI connector. This HDMI port support HDMI and DVI digital video sources. If you remove the HDMI screw post, use the provides IOS screw to keep the internal HDMI jack secure. Removing the HDMI Screws without installing the ISO screws will void your warranty.

HDMI Connector: HDMI Type A SMD 19pin Female socket connector.

Note: With the proper adapters, the switcher can be used with DVI digital video signals HDCP compliant. The DVI support Audio input.

---

6. INPUTS- 1,2,3,4,5,6,7, & 8 AUDIO:

Connect a Auxiliary Audio signal link of AUDIO direct Stereo Audio to this 3.5mm OD Female Jack. This jack supports DVI audio or Auxiliary Analog Stereo Audio sources.

AUDIO Connector with Input 1 ~ Input 8

Audio: Support the auxiliary audio input when you use DVI signals.

AUDIO Connector: 3.5mm OD phone jack female socket connector.

Note: With the proper adapters, the switcher can be used with Auxiliary Audio signals and the DVI support Audio input.

---

7. OUTPUTS- 1,2,3,4,5,6,7 & 8 HDMI:

Connect a HDMI signal link of destination direct HDMI signal to this Female HDMI connector. This HDMI port support HDMI and DVI digital video signals.

HDMI Audio Output : support with HDMI source audio, DVI audio and Auxiliary Audio output.

HDMI Connector: HDMI Type A SMD 19pin Female socket connector

Note: With the proper adapters, the switcher can be used with DVI digital video signals HDCP compliant. The DVI Audio supported.

---

8. OUTPUTS- 1,2,3,4,5,6,7 & 8 S/PDIF / ARC:

Connect a Audio signal output link of the Auxiliary Audio, HDMI digital audio source or ARC TV return channel audio direct to this RCA jack audio connector. This port use ARC digital audio(TV return digital Audio) and S/PDIF digital audio from HDMI or Auxiliary Audio. Use RCA connector with Output 1 ~ Output 8

Audio Output signals :

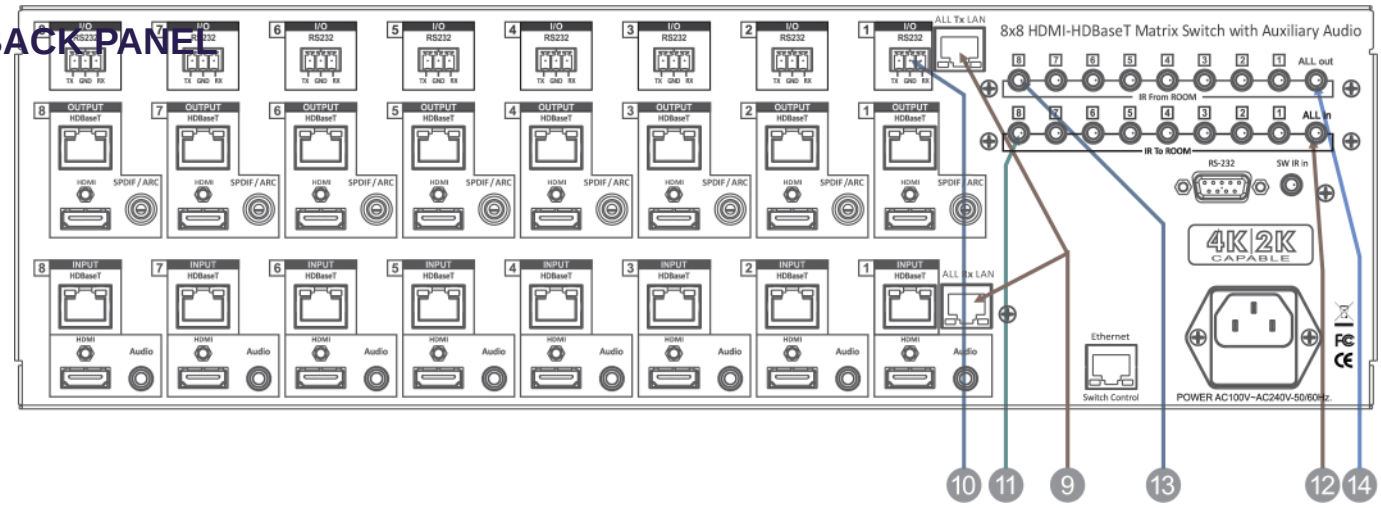
- ARC Audio (HDTV ARC Turn On)
- S/PDIF (HDMI/DVI Source Audio or Auxiliary Audio LPCM-2CH)

ARC & SPDIF Audio Connector: RCA Female connector.

Note: With the proper adapters, the Audio can be used with HDMI Audio, DVI Audio and Auxiliary Audio signals outputs. The Auxiliary Audio use digital LPCM-2CH output.

BACK PANEL - HDBaseT CONTROLS

BACK PANEL



8. HDBaseT LAN CONNECTION:

All Tx LAN : Provides Ethernet (LAN) connection from the switcher to All HDBaseT Transmitter (ie. SB-6320T).

ALL HDBaseT Tx LAN Port Connector: HDBaseT Phone-Jack 8P8C, RJ-45 Female socket.

LAN Controls: ***Note: from switcher to HDBaseT Transmitter.***

All Rx LAN : Provides Ethernet (LAN) connection from the switcher to All HDBaseT Receiver (ie. SB-6320R).

ALL HDBaseT Rx LAN Port Connector: HDBaseT Phone-Jack 8P8C, RJ-45 Female socket.

LAN Controls: ***Note: from HDBaseT Receiver to Transmitter via switcher***

---

10. HDBaseT RS-232 - 1,2,3,4,5,6,7 & 8 CONNECTION:

(8)x RS-232 control port to allow for interfacing to a PC. Controls I/O via Switcher HDBaseT Transmitter (8) Rooms each via this Terminal Block-3pin Female socket for serial RS-232 control.

Remote Port : Terminal Block-3pin Female socket

---

11. HDBaseT IR INPUT - 1,2,3,4,5,6,7 & 8
REMOTE IR SIGNAL TO ROOM:

Send (8)x IR signals to (8) rooms via Switcher HDBaseT Transmitter. When you plug the Switcher HDBaseT IR Transmitter into the external port, the room IR HDBaseT receiver remain active.

IR Extender Jack: Female Jack - inner OD Ø 3.5 mm

---

12. HDBaseT ALL IN : 1,2,3,4,5,6,7 & 8
REMOTE IR SIGNAL TO ROOM:

Send IR signal to room via Switcher HDBaseT Transmitter. When you plug the Switcher HDBaseT IR Transmitter into the external port, the room IR HDBaseT receiver remain active.

IR Extender Jack: Female Jack - inner OD Ø 3.5 mm

---

13. HDBaseT IR OUTPUT - 1,2,3,4,5,6,7 & 8
REMOTE IR SIGNAL FROM ROOM:

Receive (8)x IR signals from (8) rooms each via HDBaseT Transmitter. When you plug the Switcher HDBaseT IR Transmitter into the external port, the room IR HDBaseT receiver remain active.

IR Extender Jack: Female Jack - inner OD Ø 3.5 mm

---

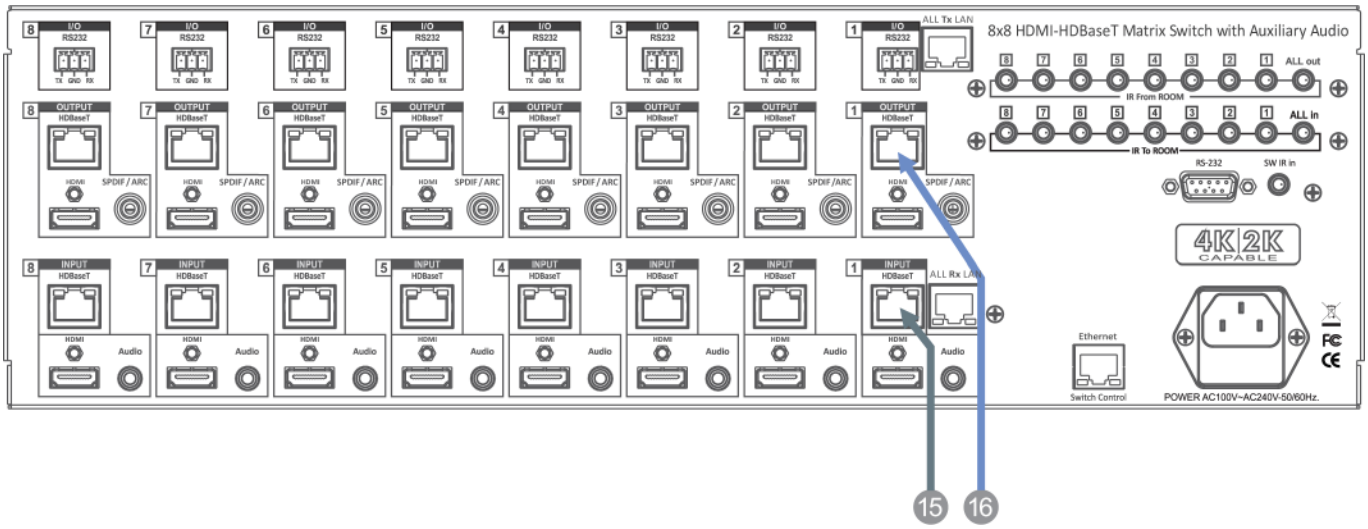
14. HDBaseT ALL OUT : - 1,2,3,4,5,6,7 & 8
REMOTE IR SIGNAL FROM ROOM:

Receive IR signal from room via Switcher HDBaseT Transmitter. When you plug the Switcher HDBaseT IR Transmitter into the external port, the room IR HDBaseT receiver remain active.

IR Extender Jack: Female Jack - inner OD Ø 3.5 mm

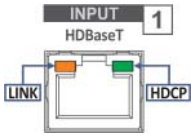
BACK PANEL - HDBaseT I/O

BACK PANEL



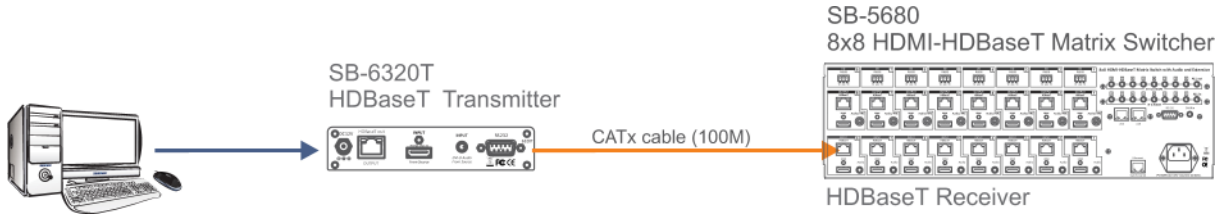
15. INPUT - 1,2,3,4,5,6,7 & 8 HDBaseT (Receiver):

To Receive (8) HDMI and control signals via Switcher (8)x HDBaseT Receivers to link of Switcher HDBaseT Transmitter. Switcher used (8)x HDBaseT Receiver Input #1 ~ Input #8 with RJ-45 via CATx (6/6a/7) category extend cable. Controls signals RS-232, ethernet, IR input & output between Transmitter and Switcher.



HDBaseT Receiver Connector: 8x RJ-45 Jack 8P8C Female socket.

Link LED :
solid = valid link
Flash = attempting to link
Off = no link established



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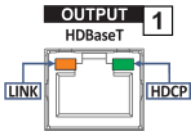
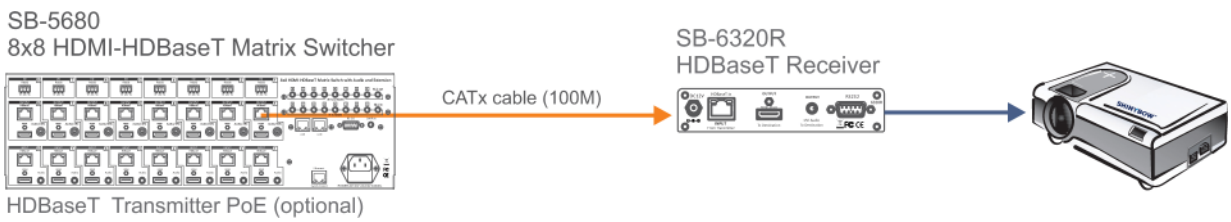
16. OUTPUT - 1,2,3,4,5,6,7 & 8 HDBaseT (Transmitter):

To send (8) HDMI and control signals via Switcher (8)x HDBaseT Transmitters to link (8)x external HDBaseT Receiver.
Switcher used (8)x HDBaseT Transmitter Output #1 ~ Output #8 with PoE (optional) RJ-45 via CATx(6/6a/7) category cable. Controls signals RS-232, ethernet, IR input, IR output and PoE between Switcher and Receiver.

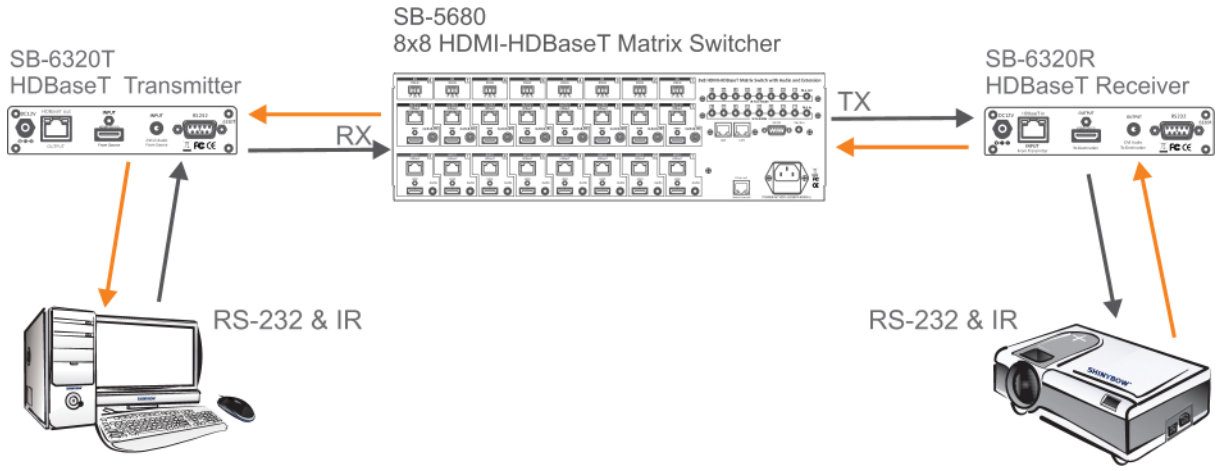


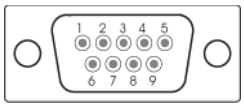
HDBaseT Transmitter Connector: 8x RJ-45 Jack 8P8C Female socket.

Link LED :
solid = valid link
Flash = attempting to link
Off = no link established



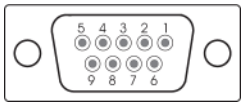
HDBASET I/O TRANSMISSION





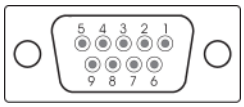
RS-232 Cable Pins Out:

PC 232 PINS
DB-9P, MALE plug



HDBaseT Transmitter SB-6320T:

RS-232 PINS OUT
DB-9P, FEMALE socket



HDBaseT Receiver SB-6320R:

RS-232 PINS OUT
DB-9P , FEMALE socket

REMOTE CONTROL

Before making any connections to the switcher, observe the following:

- Ensure the mains voltage supply matches the label on the supplied plug- Pack (+/- 10%).
- Ensure that the power switch is OFF.
- Ensure that all system grounds (earth) are connected to a common point.
- Avoid powering equipment within a system from multiple power sources that may be separated by large distances.
- Connect all audio video sources and destination equipment.
- Power up all source and destination audio-visual sources.
- For each destination output, select the appropriate input source by using the front panel input 1~8 select buttons. The supplied IR remote control or through the RS-232 serial communications port.
- Upon power up the switcher will return to its last used setting before Powered down.

REMOTE CONTROL

IR REMOTE CONTROL KEY :

1. & 2. SWITCH POWER ON or OFF:
Controller with a separate power ON and OFF

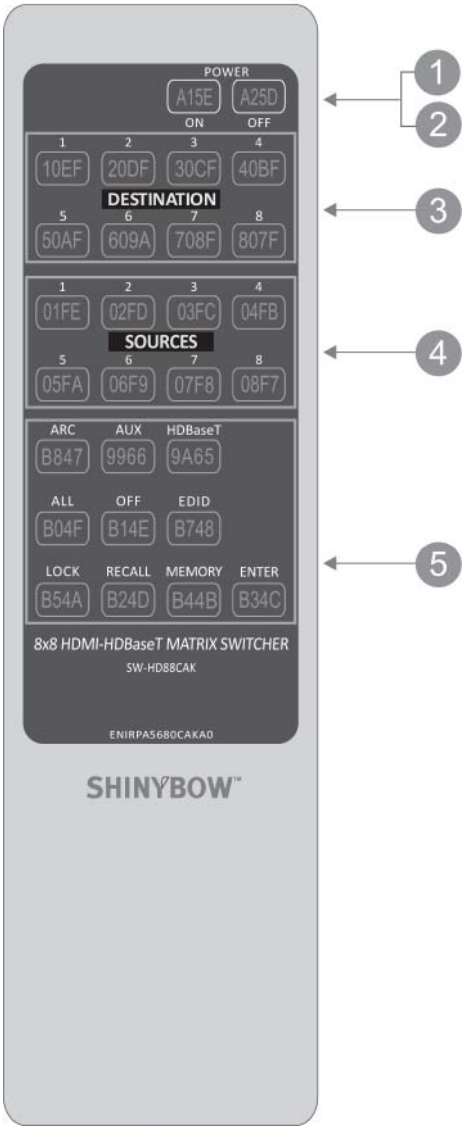
3. DESTINATION : 1 thru 8 OUTPUT SELECTION:
Press the destination button to select the output display channel.

4. SOURCE : 1 thru 8 INPUT SOURCE SELECTION:
Press input 1~8 sources with selection button.

5. FUNCTION KEY:

ARC	- function selection button
AUX	- function selection button
HDBaseT	- function selection button
ALL	- function selection button
OFF	- function selection button
EDID	- function selection button
RECALL	- function selection button
MEMORY	- function selection button
ENTER	- function selection button
LOCK	- function selection button

IR REMOTE : SW-HD88CAK



REMOTE PROTOCOL COMMANDS

IR REMOTE CUSTOM AND DATA CODES (NEC STANDARD)

HOW TO SETUP IR CODES : **CUSTOM CODE : 41BE**

POWER ON :	41BE A15E		
POWER OFF :	41BE A25D		
ARC :	41BE B847	LOCK :	41BE B54A
AUX :	41BE 9966	EDID :	41BE B748
HDBaseT :	41BE 9A65	RECALL :	41BE B24D
ALL :	41BE B04F	ENTER :	41BE B34C
OFF :	41BE B14E	MEMORY :	41BE B44B

PRESS DESTINATION - # then PRESS SOURCE - #

DESTINATION #1 : 41BE 10EF	SOURCE #1 : 41BE 01FE
DESTINATION #2 : 41BE 20DF	SOURCE #2 : 41BE 02FD
DESTINATION #3 : 41BE 30CF	SOURCE #3 : 41BE 03FC
DESTINATION #4 : 41BE 40BF	SOURCE #4 : 41BE 04FB
DESTINATION #5 : 41BE 50AF	SOURCE #5 : 41BE 05FA
DESTINATION #6 : 41BE 609F	SOURCE #6 : 41BE 06F9
DESTINATION #7 : 41BE 708F	SOURCE #7 : 41BE 07F8
DESTINATION #8 : 41BE 807F	SOURCE #8 : 41BE 08F7

For example;
Select Destination # 1 to show Source #1~8,

The IR Data Code list :

Destination # 1 , Source #1	41BE	10EF	41BE	01FE	01FE
Destination # 1 , Source #2	41BE	10EF	41BE	01FE	02FD
Destination # 1 , Source #3	41BE	10EF	41BE	01FE	03FC
Destination # 1 , Source #4	41BE	10EF	41BE	01FE	04FB
Destination # 1 , Source #5	41BE	10EF	41BE	01FE	05FA
Destination # 1 , Source #6	41BE	10EF	41BE	01FE	06F9
Destination # 1 , Source #7	41BE	10EF	41BE	01FE	07F8
Destination # 1 , Source #8	41BE	10EF	41BE	01FE	08F7

ROOM REMOTE CONTROL #1 ~ #8 CUSTOM CODE AND DATA CODES

IR CUSTOM AND DATA CODES (NEC Standard)

PRESS Number To Select SOURCE
CUSTOM CODE : 41BE

IR-01 DATA CODE:
SOURCE #1 : 41BE 11EE
SOURCE #2 : 41BE 12ED
SOURCE #3 : 41BE 13EC
SOURCE #4 : 41BE 14EB
SOURCE #5 : 41BE 15EA
SOURCE #6 : 41BE 16E9
SOURCE #7 : 41BE 17E8
SOURCE #8 : 41BE 18E7

IR-02 DATA CODE:
SOURCE #1 : 41BE 21DE
SOURCE #2 : 41BE 22DD
SOURCE #3 : 41BE 23DC
SOURCE #4 : 41BE 24DB
SOURCE #5 : 41BE 25DA
SOURCE #6 : 41BE 26D9
SOURCE #7 : 41BE 27D8
SOURCE #8 : 41BE 28D7

IR-03 DATA CODE:
SOURCE #1 : 41BE 31CE
SOURCE #2 : 41BE 32CD
SOURCE #3 : 41BE 33CC
SOURCE #4 : 41BE 34CB
SOURCE #5 : 41BE 35CA
SOURCE #6 : 41BE 36C9
SOURCE #7 : 41BE 37C8
SOURCE #8 : 41BE 38C7

IR-04 DATA CODE:
SOURCE #1 : 41BE 41BE
SOURCE #2 : 41BE 42BD
SOURCE #3 : 41BE 43BC
SOURCE #4 : 41BE 44BB
SOURCE #5 : 41BE 45BA
SOURCE #6 : 41BE 46B9
SOURCE #7 : 41BE 47B8
SOURCE #8 : 41BE 48B7

ROOM REMOTE CONTROL #1 ~ #8 CUSTOM CODE AND DATA CODES

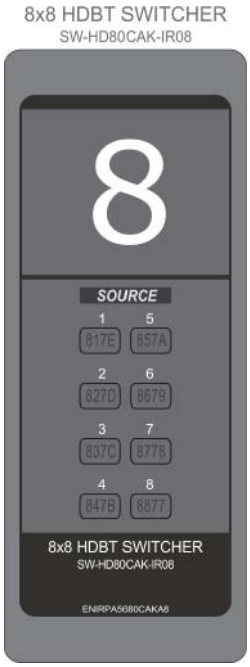
IR CUSTOM AND DATA CODES (NEC Standard)

PRESS Number To Select SOURCE
CUSTOM CODE : 41BE

IR-05 DATA CODE:
SOURCE #1 : 41BE 51AE
SOURCE #2 : 41BE 52AD
SOURCE #3 : 41BE 53AC
SOURCE #4 : 41BE 54AB
SOURCE #5 : 41BE 55AA
SOURCE #6 : 41BE 56A9
SOURCE #7 : 41BE 57A8
SOURCE #8 : 41BE 58A7

IR-06 DATA CODE:
SOURCE #1 : 41BE 619E
SOURCE #2 : 41BE 629D
SOURCE #3 : 41BE 639C
SOURCE #4 : 41BE 649B
SOURCE #5 : 41BE 659A
SOURCE #6 : 41BE 6699
SOURCE #7 : 41BE 6798
SOURCE #8 : 41BE 6897

IR-07 DATA CODE:
SOURCE #1 : 41BE 718E
SOURCE #2 : 41BE 728D
SOURCE #3 : 41BE 738C
SOURCE #4 : 41BE 748B
SOURCE #5 : 41BE 758A
SOURCE #6 : 41BE 7689
SOURCE #7 : 41BE 7788
SOURCE #8 : 41BE 7887



IR-08 DATA CODE:
SOURCE #1 : 41BE 817E
SOURCE #2 : 41BE 827D
SOURCE #3 : 41BE 837C
SOURCE #4 : 41BE 847B
SOURCE #5 : 41BE 857A
SOURCE #6 : 41BE 8679
SOURCE #7 : 41BE 8778
SOURCE #8 : 41BE 8877

EDID FUNCTION

EDID FUNCTION FOR HDMI MATRIX SWITCHER

EDID Setup	To Change the EDID Setup
Step 1. Press the **EDID** button	The display will show the currently selected EDID mode
Step 2. Press **SOURCE** #1 or #2 button row	The button will flash blue and the display will show the current **Embedded EDID** Status.
Step 3. Press the **ENTER** button	To set **EDID** mode. The switcher will return to operation mode.
Operation will abort if no keys are pressed within 5 seconds.	
RESET	**EDID Return To Factory default**
How to RESET EDID mode Press **EDID** > **RECALL** > **ENTER** 	RESET To the FACTORY DEFAULT (1080p-2CH). Press **EDID** button : The LCM will show the current EDID status. Press **RECALL** button : The LCM will show the RESET EDID. Press **ENTER** to confirm entries. The EDID will return to FSS mode and resolution 1080p-2CH.
Embedded EDID Modes	**Total 8 EDID Modes**
Embedded EDID setup Press **EDID** > **SOURCE** > **ENTER** **SOURCE #1** **or** **SOURCE #2** Select Embedded EDID : Mode 1 : FSS Mode 2 : H24-3D Mode 3 : H24-3D-M Mode 4 : H36-3D Mode 5 : H36-3D-M Mode 6 : 4K2K Mode 7 : DVI-D 1920x1200-60Hz Mode 8 : AUTO	To select Embedded EDID mode or LEARNING mode. Press **EDID** button: The LCM will show the current EDID status. Repeatedly depressing the **Source 1** button will cycle **up** thru the options. Repeatedly depressing the **Source 2** button will cycle **down** thru the options.
EDID function for HDMI Matrix Switcher	
Mode 1. FSS (Fast Speed Start) 	**Fast Speed Start** mode shortens the startup time of the switcher. Selecting this mode does not force the EDID setup to be cancelled. Users may first select one EDID mode from mode 2 to 3, and then select mode 1 for fast speed start.
Mode 2. H24-3D (1080p-24 bits) 	Audio Support: PCM 2CH
Mode 3. H24-3D-M (1080p-24 bits) 	Audio Support: MAT(MLP) 7.1CH, PCM-2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH
Mode 4. H36-3D-M (1080p-36 bits) 	Audio Support: PCM 2CH

EDID FUNCTION

Mode 5 . H36-3D-M (1080p-36 bits) 	Audio Support : MAT(MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH
Mode 6 . 4K2K (24/30Hz) 	HDMI Support : 4K2K-3D, PCM 2CH (3860x2160-24/30Hz) Audio Support: PCM 2CH
Mode 7 . 1920x1200-60Hz (DVI-D) 	DVI Support : DVI-D 1920 x 1200 60Hz
Mode 8 . AUTO <Default> 	All Outputs will be set to the highest common resolution of all connected display devices.
LEARNING EDID	**Learning EDID from Destination to Source**
Learning EDID Setup Press **EDID > DESTINATION > SOURCE > ENTER**	Press **EDID > DESTINATION** Button: The LCM will be show LEARNING. Switcher will **LEARN** destination HDMI EDID and pass the selected source. **Learning EDID setup for HDMI:** Key Press Sequence: **EDID > DESTINATION # > SOURCE # > ENTER** The EDID for HDMI has been learned
Press **EDID > DESTINATION > DESTINATION > SOURCE > ENTER**	Switcher will **LEARN** destination HDBaseT CATx EDID and pass the selected source. **Learning EDID setup for HDBaseT CATx:** Key Press Sequence: **EDID > DESTINATION # > DESTINATION # > SOURCE # > ENTER** Again, Press the same DESTINATION # to learn HDBaseT CATx EDID The EDID for HDBaseT CATx has been learned

NOTE : The already learned EDID cannot be modified. You can only rebuild a new Learning EDID.

For example: When the Source has “Learned” the EDID data from a destination, It will save that EDID information into EPROM and the EDID data cannot change. Please select new learning destination to sources or change to one of the embedded EDID modes when you want to remove the learning EDID memory from EPROM.

EDID FUNCTION

Learning EDID Single to Single	Example : Learn Destination #8 EDID To Source #5.
Step 1. Press **EDID** button	The button will flash blue and the display will show the current **Embedded EDID** Status.
Step 2. Press the Destination #8 button row	Copy the Destination #8 Display EDID.
Step 3. Press the Source #5 button row	Learning the Destination #8 EDID to Source # 5.
Step 4. Press **ENTER** button	To confirm entries.
Learning EDID Single to Multiple	Learning destination EDID link to the majority Sources
Step 1. Press **EDID** button	The button will flash blue and the display will show the current **Embedded EDID** Status.
Step 2. Press the Destinations #1 ~ 8 button row	Copy any 1~8 Destinations EDID.
Step 3. Press the Source #1, #6~#8 button row	Learning the Destination EDID link to Source #1, #6 ~ #8 .
Step 4. Press **ENTER** button	To confirm entries.
Learning EDID Single to ALL	Learning destination EDID link to All Sources
Step 1. Press **EDID** button	The button will flash blue and the display will show the current **Embedded EDID** Status.
Step 2. Press destination button 1 thru 8	Learning anyone 1~8 Destination EDID to all sources.
Step 3. Press **ALL** button	Learning selected destination EDID to all sources.
Step 4. Press **ENTER** button	To confirm entries.
LEARNING EDID definition	Learning EDID from Destination to Source

1. Switcher will **LEARN** destination **EDID** and pass the selected source.

2. To set up learning between a single destination and single source: Press **EDID** button > Press **Destination** 1 thru 8 > Press **Source** 1 thru 8 > Press **ENTER** to confirm. Switcher will learn destination EDID to source device.

3. To set up learning between a single destination and Multiple sources: Press **EDID** button > Press **Destination** 1 thru 8 > Press the majority **Sources** 1 thru 8 > Press **ENTER**. Switcher will learn single destination EDID to many source devices.

4. How to Learning single destinations with all sources. Press **EDID** button > Press **ALL** button > Press **ENTER** to confirm.

Auto mode definition	Common Resolution and Audio

Switcher will find highest common Resolution and Audio from all destination EDID to link Source.

Example for single source
Destination > press #1 and then Source > press #1
Destination device #1 will set to the highest common resolution and Audio of source #1

Example for multiple sources
Destination device #1, #2, #3 will be set to the highest common resolution and Audio available and source device #1 will output this same resolution.

TYPICAL APPLICATION

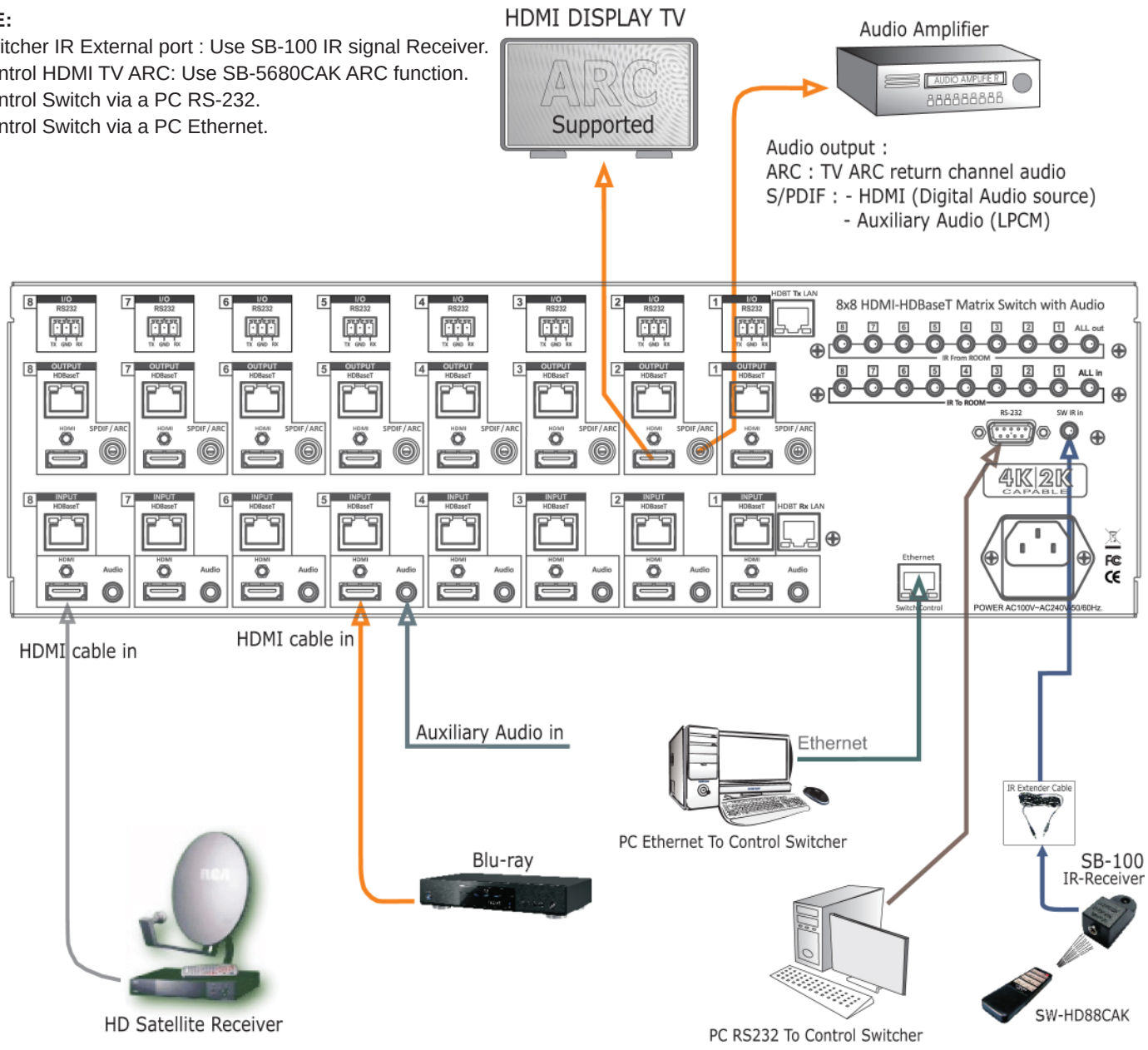
INSTALLING DIAGRAM

Samples connection :

1. Using IR External, RS-232 or Ethernet command to control Switcher SB-5680CAK via PC or SB-100 IR receiver transmit the SB-5680CAK's IR signal.
2. Audio output link ARC from TV return channel, HDMI audio source or mixing Auxiliary audio.

NOTE:

1. Switcher IR External port : Use SB-100 IR signal Receiver.
2. Control HDMI TV ARC: Use SB-5680CAK ARC function.
3. Control Switch via a PC RS-232.
4. Control Switch via a PC Ethernet.

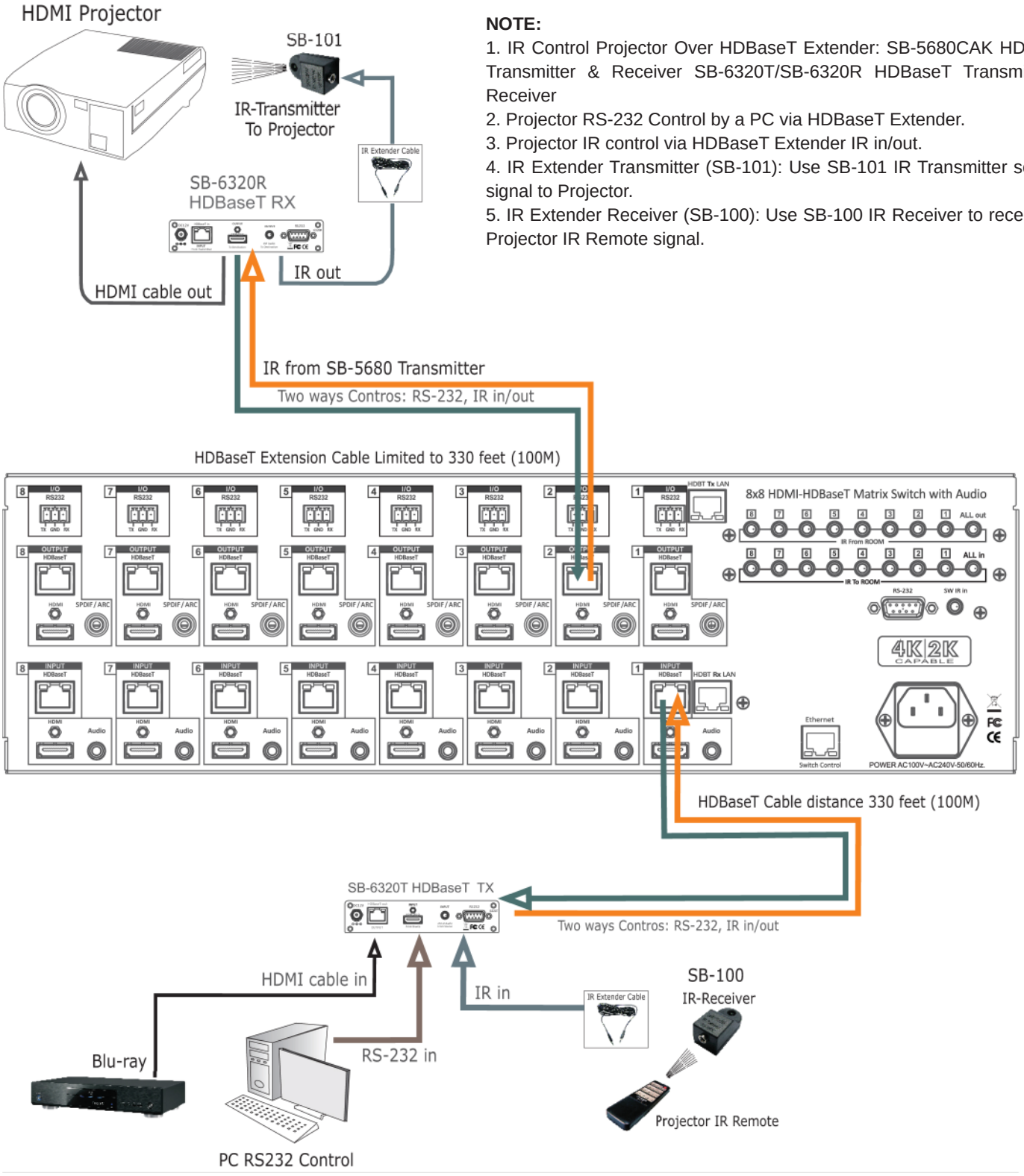


Application RS-232, IR and Ethernet control the Switcher.

TYPICAL APPLICATION

INSTALLING DIAGRAM

Sample connection using SB-5680CAK HDBaseT Transmitter & Receiver with HDBaseT Transmitters (SB-6320T) and HDBaseT Receiver (SB-6320R) to control a projector via RS-232 or IR signals.



NOTE:

1. IR Control Projector Over HDBaseT Extender: SB-5680CAK HDBaseT Transmitter & Receiver SB-6320T/SB-6320R HDBaseT Transmitter & Receiver
2. Projector RS-232 Control by a PC via HDBaseT Extender.
3. Projector IR control via HDBaseT Extender IR in/out.
4. IR Extender Transmitter (SB-101): Use SB-101 IR Transmitter send IR signal to Projector.
5. IR Extender Receiver (SB-100): Use SB-100 IR Receiver to receive the Projector IR Remote signal.

TYPICAL APPLICATION

INSTALLING DIAGRAM

Table list is all RS-232 or IR signals control define via HDBaseT Transmitter & Receiver and SB-5680CAK Switcher.

Input Type	Output Type	SB-6320T (RS-232)	SB-6320R (RS-232)	SB-5680CAK (RS-232)	SB-6320T (IR IN/OUT)	SB-6320R (IR IN/OUT)	SB-5680CAK (IR IN/OUT)
HDBaseT	HDBaseT	Enabled	Enabled	Disabled	Enabled	Enabled	Enabled
HDBaseT	HDMI	Enabled	N/A	Disabled	Enabled	Enabled	Enabled
HDMI	HDBaseT	N/A	Enabled	Enabled	Enabled	Enabled	Enabled
HDMI	HDMI	N/A	N/A	Enabled	Enabled	Enabled	Enabled

Notes:

(1) When using HDBaseT Source and HDBaseT Destination, the RS-232 signals only pass between the SB-6320T and SB-6320R that are on the lowest Destination channel.

Example #1:

Input 01 routed to Destination 01, 03 and 08

SB-6320T Connected to HDBaseT Input 01

a. Destination 01, 03 and 08 will pass bi-directional IR signals to the SB-6320T IR Input & Output and the chassis SB-5680CAK IR Input & Output.

b. Only Destination 01 will receive the RS-232 signal from Input 01

Example #2:

Input 01 routed to Destination 03 and 08

SB-6320T > SW Input-01 (select HDBaseT), The SB-6320R can receive below signals

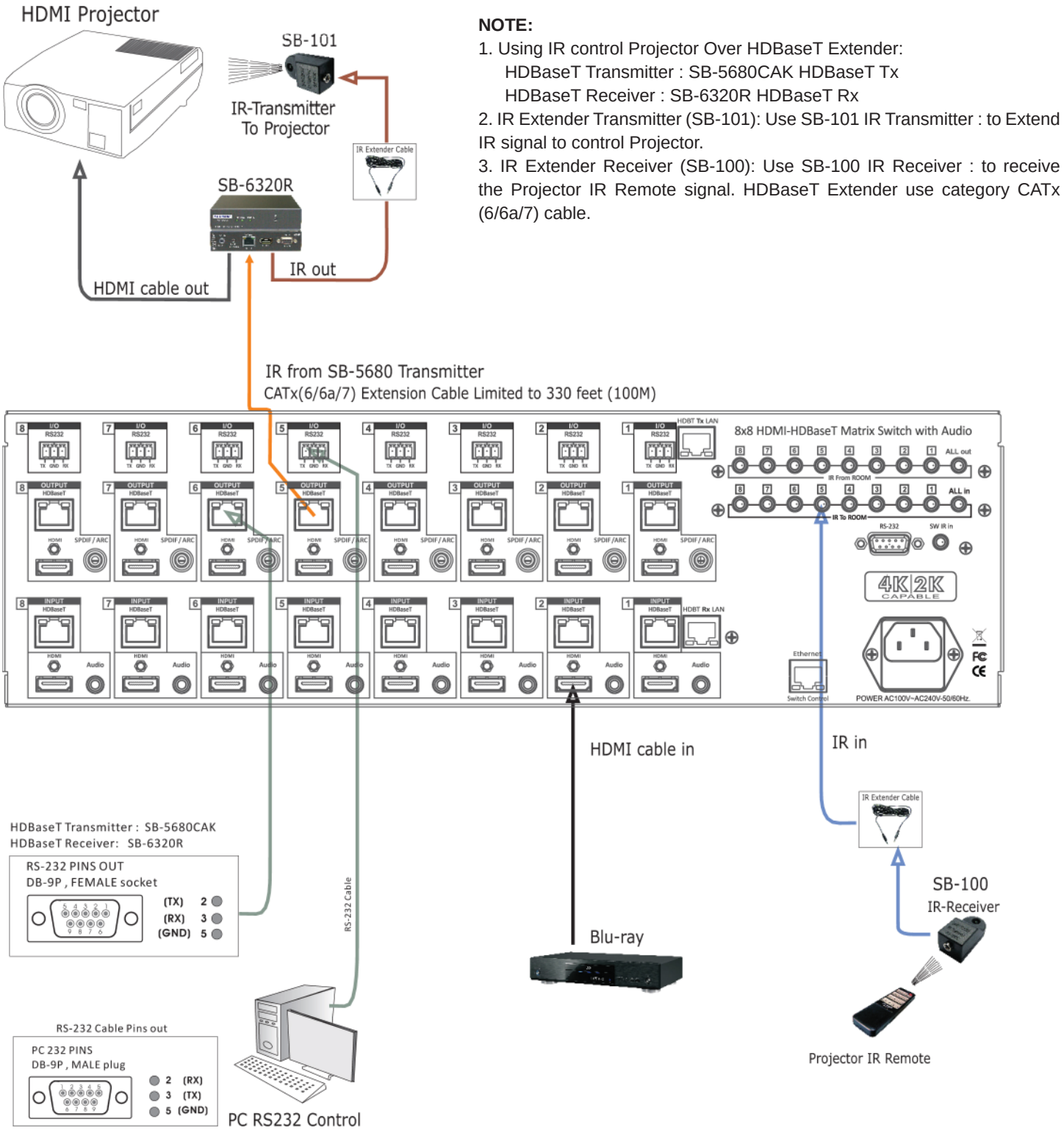
a. Destination 03 and 08 will pass bi-directional IR signals to the SB-6320T IR Input & Output and the chassis SB-5680CAK IR Input & Output.

b. Only Destination 03 will receive the RS-232 signal from Input 01

TYPICAL APPLICATION

INSTALLING DIAGRAM

Sample connection using SB-5680CAK with HDBaseT Receiver (SB-6320R) via and IR Transmitters (SB-101) and IR Receiver (SB-100) to control a projector.



NOTE:

1. Using IR control Projector Over HDBaseT Extender:
   HDBaseT Transmitter : SB-5680CAK HDBaseT Tx
   HDBaseT Receiver : SB-6320R HDBaseT Rx
2. IR Extender Transmitter (SB-101): Use SB-101 IR Transmitter : to Extend IR signal to control Projector.
3. IR Extender Receiver (SB-100): Use SB-100 IR Receiver : to receive the Projector IR Remote signal. HDBaseT Extender use category CATx (6/6a/7) cable.

TYPICAL APPLICATION

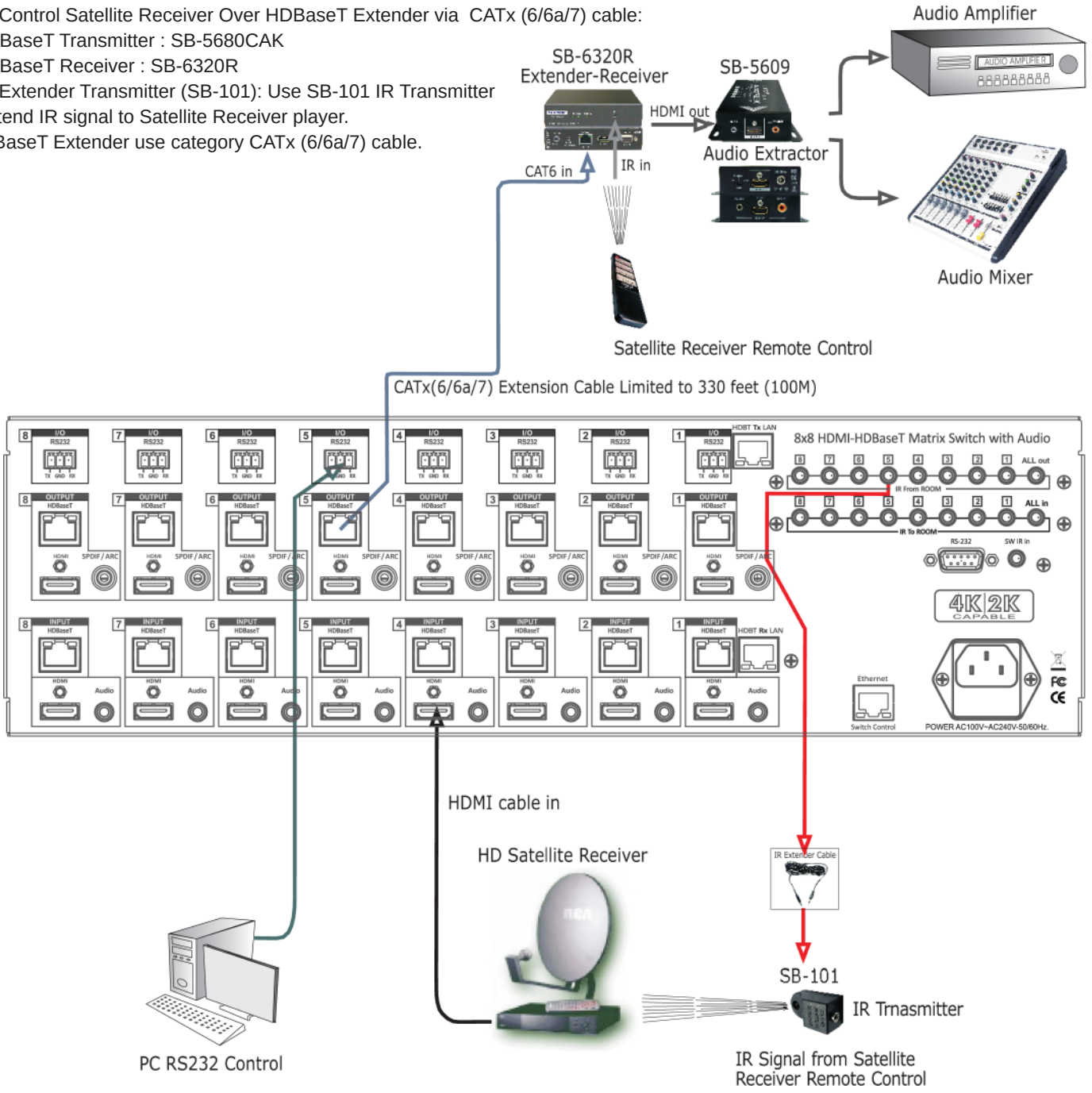
INSTALLING DIAGRAM

Sample connection using SB-5680CAK with IR Transmitters (SB-101) via SB-6320R to control a IR signal from Satellite Receiver.

NOTE:

1. IR Control Satellite Receiver Over HDBaseT Extender via CATx (6/6a/7) cable:
   HDBaseT Transmitter : SB-5680CAK
   HDBaseT Receiver : SB-6320R
2. IR Extender Transmitter (SB-101): Use SB-101 IR Transmitter to Extend IR signal to Satellite Receiver player.

* HDBaseT Extender use category CATx (6/6a/7) cable.



Support HDBaseT Extender by SB-6320T Transmitter and SB-6320R Receiver via CATx(6/6a/7) cable

HDBaseT APPLICATION

APPLICATION

HDBaseT Matrix Switcher using HDBaseT Transmitters & Receiver (Sold separately).

HDBaseT Transmitter with Audio: SB-6320T

Distance: Max. 100M

INPUTS:

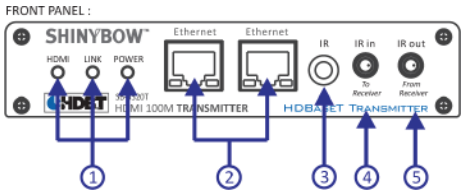
1. 1x HDMI source
2. 1x DVI Audio
3. 1x IR External in

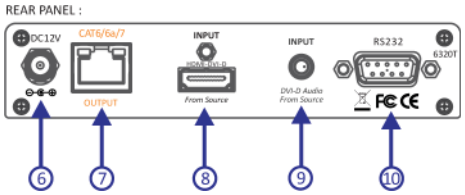
OUTPUTS:

1. 1x HDBaseT out

Controls:

1x RS-232, 1x IR in, 1x IR out, 2x LAN (Ethernet)





1. Status via LED Show out : POWER, LINK & HDMI	6. DC input : DC12V
2. 2x Ethernet path to HDBaseT Receiver	7. RJ-45 out : HDBaseT signal output to HDBaseT Receiver
3. IR signal to HDBaseT Receiver	8. HDMI in : HDMI signal input from HDMI source device
4. IR signal to HDBaseT Receiver	9. Audio in : Extra DVI Audio (LPCM-2CH) input
5. IR signal from HDBaseT Receiver	10. RS-232 I/O : RS-232 series interface control via a PC

HDBaseT Receiver with Audio: SB-6320R

Distance: Max. 100M

INPUTS:

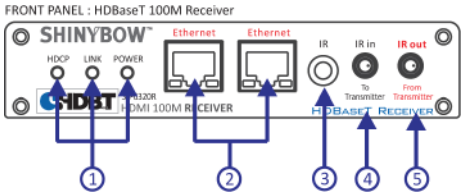
1. 1x HDBaseT in
2. 1x IR External in

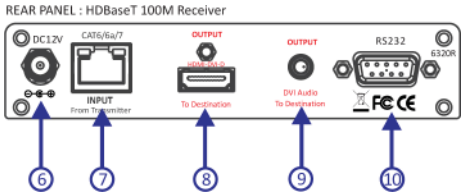
OUTPUTS:

1. 1x HDMI out
2. 1x DVI Audio

Controls:

1x RS-232, 1x IR in, 1x IR out, 2x LAN (Ethernet)





1. Status via LED Show out : POWER, LINK & HDCP	6. DC input : DC12V
2. 2x Ethernet path to Transmitter	7. RJ-45 in : HDBaseT signal input from the HDBaseT Transmitter
3. IR signal to HDBaseT Transmitter	8. HDMI out : HDMI signal output to HDMI destination display device
4. IR signal to HDBaseT Transmitter	9. Audio out : HDMI or DVI Audio(LPCM-2CH) outputs
5. IR signal from HDBaseT Transmitter	10. RS-232 I/O : RS-232 series interface control via a PC

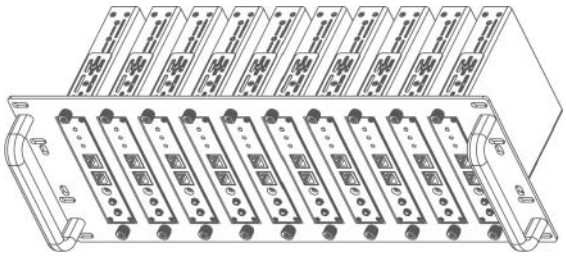
Support HDBaseT Extender by Transmitter and Receiver via HDBaseT CATx(6/6a/7) cable

HDBaseT APPLICATION

APPLICATION

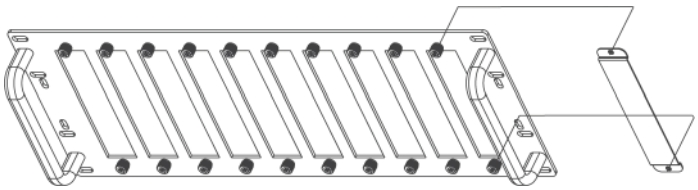
Optional 19 inch Rack Mount Bracket for SB-6320T and/or SB-6320R:

Complete 19 inch 4U rack mount of SB-6069
Install Application : SB-6320T/R



SB-6069 (optional)
SB-6320T/R 19 INCH 4U-10P RACK MOUNT

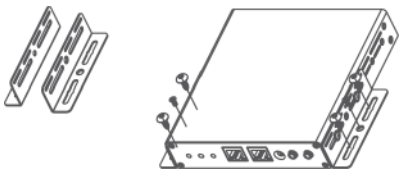
1. Model No. : #4U-10p-M130MM
SB-6320T/R 4U Ear mount pairs
Parts No.: MEER6069ER13000



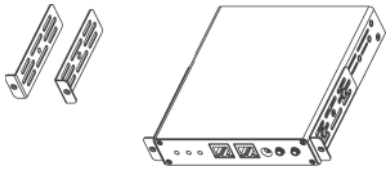
2. Model No. : #4U-10p-M130MM-COV
SB-6320T/R 4U Ear mount pairs
Parts No.: MEER6069ER11000

SB-6320T/R : Wall mount accessories

3. Model No. : #WM-1INCH-130MM
SB-6320T/R Wall mount pairs
Parts No.: MEER6320ER11000



4. Model No. : #4U-10p-M130MM-EAR
SB-6320T/R 4U Ear mount pairs
Parts No.: MEER6320ER11001



Support HDBaseT Extender by Transmitter and Receiver via HDBaseT CATx(6/6a/7) cable

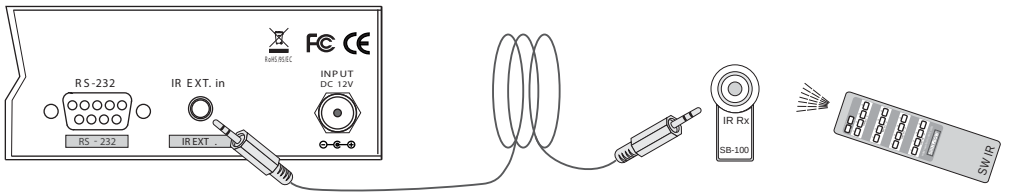
IR EXTENDER

IR RECEIVER:

1. SB-100 IR 300M Receiver

Device Cable (3C) IR Receiver (SB-100)

SB-100 IR Receiver Set



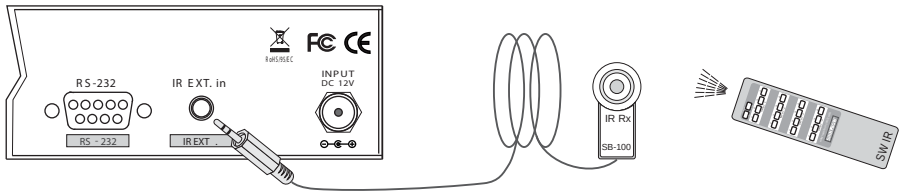
SB-100 Maximum Distance ~ 984 feet (300 meters)

2. SB-100C IR 2M Receiver

Device Cable (3C) IR Receiver (SB-100C)

IR Receiver cable 6ft (2M)

SB-100C IR Receiver Cable



SB-100C Maximum Distance ~ 6 feet (2 meters)

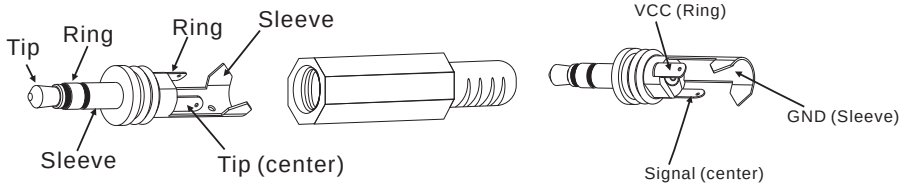
**** When you plug the External IR extender into the switcher, the front panel IR receiver remains active. ****

PIN CONFIGURATION:

SB-100 and SB-100C Receiver Pin configuration

SB-100 IR Receiver Set

Tip: Signal
Ring :VCC
Sleeve: GND

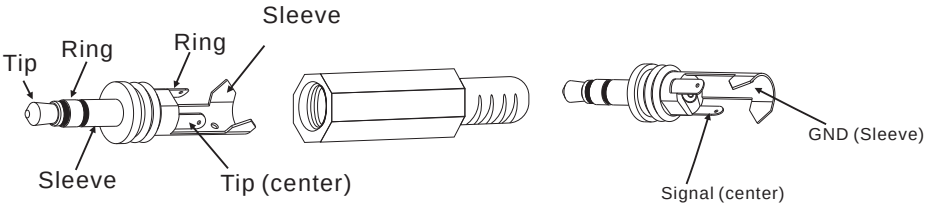


SB-100 Maximum Distance ~ 984 feet (300 meters)

IR Receiver cable 6ft (2M)

SB-100C IR Receiver Cable

Tip: Signal
Ring: NC
Sleeve: GND



SB-100C Maximum Distance ~ 6 feet (2 meters)

Note: *The External IR jack has voltage on the "Ring" portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.*

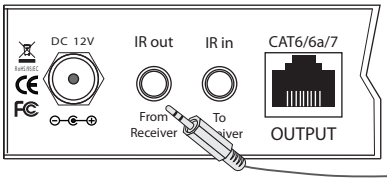
IR EXTENDER

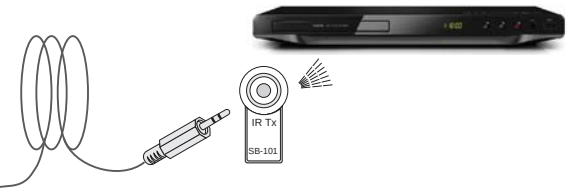
IR EMITTER:

1. SB-101 IR 300M Transmitter

Device Cable (3C) IR Transmitter (SB-101)

SB-101 IR Transmitter Set





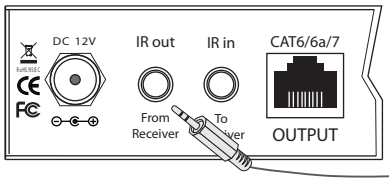
SB-101 Maximum Distance ~ 984 feet (300 meters)

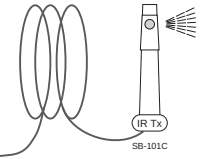
2. SB-101C IR 2M Transmitter

Device Cable (3C) IR Transmitter (SB-101C)

IR Transmitter cable 6ft (2M)

SB-101C Transmitter Cable





SB-101C Maximum Distance ~ 6 feet (2 meters)

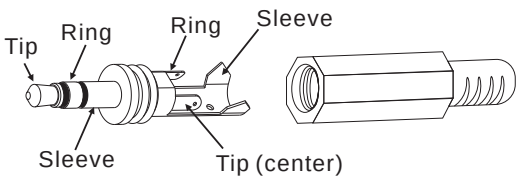
**** When you plug the External IR extender into the switcher, the front panel IR transmitter remains active. ****

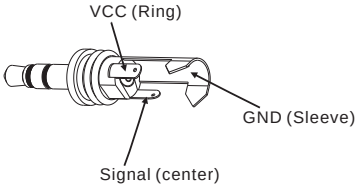
PIN CONFIGURATION:

SB-101 and SB-101C Transmitter Pin configuration

SB-101 IR Transmitter Set

Tip: Signal
Ring :VCC
Sleeve: GND



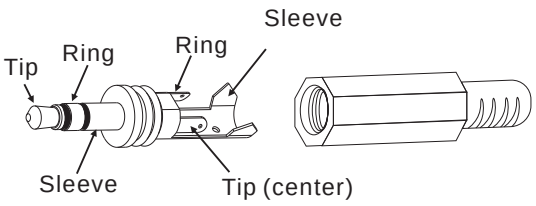


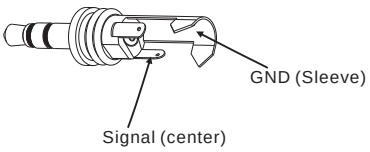
SB-101 Maximum Distance ~ 984 feet (300 meters)

IR Transmitter cable 6ft (2M)

SB-101C Transmitter Cable

Tip: Signal
Ring: NC
Sleeve: GND





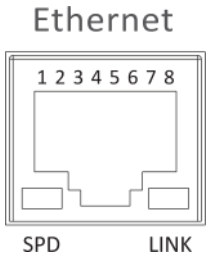
SB-101C Maximum Distance ~ 6 feet (2 meters)

Note: *The External IR jack has voltage on the "Ring" portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.*

ETHERNET SERIAL INTERFACE

ETHERNET SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM. VERSION COMPATIBLE V2.0

For a complete list of commands, please reference external document extended Ethernet Protocol Instruction Manual.



Note :
Control the switcher
SPD : Speed
LINK : Ethernet link
RJ-45 Female 8P-8 Connector

ETHERNET SERIAL INTERFACE

Pin	Ethernet	Reference
1	TXOP	TX +
2	TXON	TX -
3	RXIP	RX +
4	NC	
5	NC	
6	RXIN	RX -
7	NC	
8	GND	

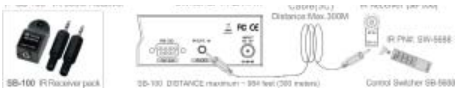
ETHERNET TCP/IP PROTOCOL COMMANDS (Ethernet / RS-232 Control driver V2.0.1)

****** The Ethernet port and RS-232 port cannot be used simultaneously. Any connection to the Ethernet Control port will disable serial commands send to the RS-232 port.******

RS-232 SERIAL INTERFACE

RS-232 SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM. VERSION -2.0 COMPATIBLE

For a complete list of commands, please reference external document extended RS-232 Protocol Instruction Manual.



RS-232 SERIAL INTERFACE

Pin	RS-232	Definition
1	--------	Not used
2	TX	Transmitter
3	RX	Receiver
4	--------	Not used
5	GND	Ground
6	--------	Not used
7	--------	Not used
8	--------	Not used
9	--------	Not used

RS-232 PROTOCOL COMMANDS (RS-232 Control driver V2.0.1)

The ShinybowUSA switcher can be controlled via the TCP/IP serial control port to allow for interfacing to a PC, or similar third party control system.

The serial communication parameters are 9600 baud, 8 bit, No Parity and 1 stop bit - this is often referred to as 9600 8N1. When the unit recognizes a complete command it will perform the requested action - there is no delimiter character required.

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END OF DOCUMENT

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www.shinybowusa.com